Practice: 655 - Forest Trails and Landings

Scenario # 1 **Water Bar Installation with Light Shaping and Grading**

Scenario Description: **Missouri**

Rehabilitation of existing forest access trails and landings by addressing erosion and sedimentation through light shaping/grading and the installation of water bars. Typically the trail is a single lane, existing 12-foot wide seasonal or temporary trail on a moderate slope (10%) on forestland requiring sustained erosion control measures applied by using traditional logging equipment such as a log skidder or dozer. The purpose is to hydrologically disconnect existing trail/landing system from the streams and natural drainages. This scenario applies to only those segments of the trail system that have resource concerns requiring rehabilitation. A typical water bar installed in this scenario is on a 75 to 80 foot spacing with a depth of about 1 foot. Some hand work (chainsaw) will be needed to allow the use of the equipment without causing damage to residual trees. The work will be supervised. No mobilization is required, as equipment and personel are already on site. Other practices such as Stream Crossing, and Critical Area Planting, Access Road and Structure for Water Control can be adjacent/appurtenant but not part of this practice scenario . Resource concerns include: Excessive sedimentation in surface waters, Concentrated flow erosion, Sheet and rill erosion, and Degradation of wildlife species.

Before Practice Situation:

Trails are delivering sediment to waterways, impacting riparian/wetlands and/or possibly affecting fish/T&E species. The usefulness of the trail/landing system is being adversely affected by erosion.

After Practice Situation:

Trails and landings provide access and do not adversely affect the resources concerns.

Scenario Feature Measure:

Number of water bars

Scenario Typical Size:	34	Each	Tot Unit Cost	$39.74

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Water Bars	510	Foot	$1.40	$714.00
Equip./Install.	Log skidder	3	Hour	$123.04	$369.12
Equip./Install.	Chainsaw	1	Hour	$5.64	$5.64
Labor	General Labor	1	Hour	$21.56	$21.56
Labor	Specialist Labor	2	Hour	$79.60	$159.20
Labor	Equipment Operators, Heavy	3	Hour	$27.22	$81.66
				Total Cost:	$1,351.18

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$29.81	EQIP-HU	$35.77
WHIP	$29.81	WHIP-HU	$35.77
EQIP-CCPI	$29.81		
EQIP-CCPIHU	$35.77		

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Scenario # 2 **Shaping and Grading**

Scenario Description: **Missouri**

Rehabilitation of existing forest access trails and landings by addressing rutting, erosion, and sedimentation through shaping and grading and installing other widely spaced mitigating practices such as broad based drainage dips, water bars, and water turnouts. Typically the trail is a single lane, existing 12-foot wide seasonal or temporary trail on a relatively flat slopes (2%) on forestland requiring sustained erosion control measures applied by using traditional logging equipment such as a log skidder or dozer. The purpose is to hydrologically disconnect the existing trail/landing system from streams and natural drainages and to establish a vegetative cover. Some hand work (chainsaw) will be needed to allow the use of the equipment. The work will be supervised. Other practices such as Stream Crossing, and Critical Area Planting. Access Road and Structure for Water Control can be adjacent/appurtenant but not part of the practice scenario. Treatments are for long-term reduction of sediment, restore fish habitat, create fire access and to move routes off unstable slopes. Resource concerns include: Excessive sediment in surface waters, Concentrated and Sheet & rill flow erosion, Soil compaction, and Habitat degradation.

Before Practice Situation:

Trail/landings are delivering sediment to waterways, impacting riparian/wetlands and/or possibly affecting fish/T&E species. The usefulness of the trail/landing system is being adversely affected by erosion.

After Practice Situation:

A trail system is installed that provides access to the forested tract and does not cause excessive erosion or water quality concerns.

Scenario Feature Measure:

Length of trail treated

Scenario Typical Size:	2640	Foot	Tot Unit Cost	$0.46

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Aggregate, Gravel, Ungraded, Quarry Run	30	Cubic yard	$17.82	$534.60
Equip./Install.	Dozer, 80 HP	4	Hour	$57.19	$228.76
Equip./Install.	Chainsaw	1	Hour	$5.64	$5.64
Labor	General Labor	1	Hour	$21.56	$21.56
Labor	Specialist Labor	1	Hour	$79.60	$79.60
Labor	Equipment Operators, Heavy	4	Hour	$27.22	$108.88
Mobilization	Mobilization, Heavy Equipment Operator	1	Hour	$26.97	$26.97
Mobilization	Mobilization, medium equipment	1	Each	$200.43	$200.43
				Total Cost:	$1,206.44

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$0.34	EQIP-HU	$0.41
WHIP	$0.34	WHIP-HU	$0.41
EQIP-CCPI	$0.34	EQIP-HUCCPI	$0.41

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Scenario # 3 **Temporary Stream Crossing**

Scenario Description: **Missouri**

The design and installation of a temporary stream crossing on small order streams that will meet the immediate forest management/conservation needs. Afterwards the crossing will be restored and stabilized. Improperly designed and/or installed stream crossings will, in the long term, adversely affect water quality and aquatic life. Approaches will also be stabilized for the use of the crossing and stabilized afterwards as necessary. Installation will be supervised. Permanent and/or high-traffic crossings will be designed and installed according to the Stream Crossing (578) Standard. Resource concerns include: Excessive sediment in surface waters and Habitat degradation.

Before Practice Situation:

Access to a forested tract is not available for the installation of conservation practices or removal of forest products due to the lack of a suitable stream crossing(s).

After Practice Situation:

Access was available to address other resource concerns/management needs and the stream is restored to its previous or better condition.

Scenario Feature Measure:

Number of crossings

Scenario Typical Size:	1	Each	Tot Unit Cost	$806.36

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Aggregate, Gravel, Graded	14	Cubic yard	$24.76	$346.64
Equip./Install.	Log skidder	2	Hour	$123.04	$246.08
Labor	Specialist Labor	2	Hour	$79.60	$159.20
Labor	Equipment Operators, Heavy	2	Hour	$27.22	$54.44
				Total Cost:	$806.36

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$604.77	EQIP-HU	$725.72
WHIP	$604.77	WHIP-HU	$725.72
EQIP-CCPI	$604.77	EQIP-HUCCPI	$725.72